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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,061	04/05/2001	Chuan-Yu Hsu	YUSO-112	3443

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Raymond Sun
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EXAMINER

GIBBS, HEATHER D

ART UNIT	PAPER NUMBER
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2627

DATE MAILED: 01/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/827,061

Applicant(s)

HSU ET AL.

Examiner

Heather D. Gibbs

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 30-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 30-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment filed on 09/09/05 had been entered and made of record. Claims 30-57 are pending.

Response to Arguments

2. Applicant's arguments filed have been fully considered but they are not persuasive. Applicant argues APA does not show or describe a plurality of reflection planes formed on at least a portion of the plurality of inside walls, and one or more reflective plating films formed on at least a portion of the plurality of reflection planes to reflect light. Upon further review, the examiner respectfully disagrees and hence maintains the rejection as set forth in the previous office action.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 30-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art and Vent (US 5,489,457).

Regarding claim 30, which is representative of claim 40, Applicant's admitted prior art optical chassis comprises a shell body (141) having an accommodation space

defining a plurality of inside walls; a plurality of reflection elements (mirrors 143) formed on at least a portion of the plurality of inside walls.

With regard to the claimed one or more reflective plating films formed on at least a portion of the plurality of reflection planes to reflect light, Vent discloses a non-glass reflective element (9) of a thin plate structure pasted on a frame surface plate structure pasted on a frame surface (17) at a predetermine angle and position appropriate for reflecting light at a desired angle (Fig. 2). The non-glass reflective element (9, 20), which is a thin plate, has a reflective layer constructed of a chrome film (27) over which a clear substrate (29) is formed, and an adhesive layer (25). The reflective element (thin plate) (9, 20) also comprises two (outer) liners (23 and 31) for protecting the outside layers of the element (9, 20). These liners are removed during the pasting process of the reflective element thin plate onto the connection plane (inner surface of 17) of the frame (17) to expose an adhesive layer (25) so that the layer (25) is adhered to the surface of the frame (17). The protective Layer (31) is clear and is adhered to clear substrate (29 of 9 or 20) based on electrostatic forces (or with an adhesive that will be completely removed upon removal of the protective liner) (col. 4, lines 40-45). The reflective thin plate (9, 20) is made of flexible materials (27, 29, etc.) and fits onto the connection plane, i.e., the surface of the frame (17) of a bending- shape.

The purpose of Vent's use of the reflective thin plate (9, 20) is to increase intensity of reflected light in a document image scanner with reduced cost and complexity (col. 2, Lines 61-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Applicant's prior art and Vent in a way that reflective plating films are formed on reflection planes in order to provide an optical chassis of reduced cost and complexity and yet of high reflection efficiency as taught by Vent.

Regarding claim 31, Applicant's admitted prior art teaches a light source (142) coupled to the body to transmit light to one or more of the reflection planes (Fig 1 and 2).

For claim 32, which is representative of claim 49, Applicant's admitted prior art teaches wherein the optical chassis comprised at least a portion of an optical scanner (See Paragraph 005).

Considering claim 33, which is representative of claims 42 and 51, Applicant's admitted prior art teaches wherein the shell body and plurality of reflection planes are formed as a single piece (See Figs 1 and 2).

For claim 34, which is representative of claims 43 and 52, Applicant's admitted prior art teaches wherein the shell body further comprised a lid body and a major body, wherein the lid body and the major body are formed as separated pieces and subsequently assembled (See Fig 1).

For claim 35, which is representative of claims 44 and 53, Applicant's admitted prior art teaches wherein at least two of the plurality of inside walls are substantially opposed, and wherein a reflection plane is formed on each of the at least two substantially opposed inside walls (See Fig 2).

Considering claim 36, which is representative of claims 46 and 54, Vent teaches wherein the one or more plating films comprise one or more of: silver, chromium, aluminum, and/or platinum, and/or alloys thereof (2:6-14).

Considering claim 37, which is representative of claim 55, Applicant's admitted prior art teaches wherein at least a portion of the reflection planes have substantially corresponding angles (Fig 2).

Regarding claim 38, which is representative of claim 56, Vent teaches wherein the one or more plating films are further coated with one or more protection materials (2:6-14; 4:1-20; 5:57-6:2).

For claim 39, which is representative of claims 48 and 57, Vent discloses wherein the protection materials comprise one or more of: PE plastic films and/or macromolecular material (4:1-9).

Considering claim 45, according to Applicant's Fig 2, though it is not explicitly shown wherein forming said shell body further comprises forming from one or more of: injection molding, die-casting, squeeze forming, milling, CNC machining, and/or combinations thereof, the examiner took Official Notice of the fact that plastic injection molding is a well-known process in forming frames including image sensing modules or chassis. Therefor, it would have been obvious to one of ordinary skills in the art at the time of the invention to utilized plastic in the process of injection molding to produce a light-weighted and yet strong chassis.

For claim 47, Vent teaches forming one or more protection materials on at least a portion of the plating films (2:61-67).

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For claim 50, Applicant's admitted prior art teaches a shell body (141) having an accommodation space defining at least two inside walls: at least one reflection plane (mirrors 143) formed on the at least two inside walls; a light source (142) coupled to the body to illuminate at least one of the reflection planes; a lens set (144) to focus light reflected by the one or more reflection planes.

Vent discloses a non-glass reflective element (9,20) which is a thin plate, has a reflective layer constructed of chrome film (27) over which is a clear substrate (29) is formed, and an adhesive layer (25). The reflective element (thin plate) (9,20) also comprises two (outer) liners (23 and 31) for protecting the outside layers of the element (9, 20). These liners are removed during the pasting process of the reflective element thin plate onto the connection plane (inner surface of 17) of the frame (17) to expose an adhesive layer (25) so that the layer (25) is adhered to the surface of the frame (17). The protective Layer (31) is clear and is adhered to clear substrate (29 of 9 or 20) based on electrostatic forces (or with an adhesive that will be completely removed upon removal of the protective liner) (col. 4, lines 40-45). The reflective thin plate (9, 20) is made of flexible materials (27, 29, etc.) and fits onto the connection plane, i.e., the surface of the frame (17) of a bending- shape.

The purpose of Vent's use of the reflective thin plate (9, 20) is to increase intensity of reflected light in a document image scanner with reduced cost and complexity (col. 2, Lines 61-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Applicant's prior art and Vent in a way

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that reflective plating films are formed on reflection planes in order to provide an optical chassis of reduced cost and complexity and yet of high reflection efficiency as taught by Vent.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heather D. Gibbs whose telephone number is 571-272-7404. The examiner can normally be reached on M-Thu 8AM-7PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on 571-272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Heather D Gibbs
Examiner
Art Unit 2627

hdg



COLES

EXAMINER

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